

PHYSICS DEPARTMENT

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Physics is the study and application of the fundamental laws of nature, including the laws of motion gravity, electromagnetism, thermodynamics, and microscopic interaction. The laws govern the behavior of objects at all scales, from the smallest subatomic particles to the entire observable universe. In between, physicists study nuclear reactions, the interactions of atoms with light, properties of solids, chaotic dynamics of fluids, and the evolution of stars and galaxies, among many other topics. Classical physics is based on Newton's laws of motion and gravitation and Maxwell's equations of electricity and magnetism; while modern physics is based on Einstein's relativity and the theory of quantum mechanics.

"Science is the systematic enterprise of gathering knowledge about the world and organization and condensing that knowledge into testable laws and theories" (from a statement by the American Association of Physics Teachers) and physics is a fundamental science that underlies the other natural sciences.

Physics is one of the liberal arts and was called Natural Philosophy until a century or two ago. Physics is about asking questions and pushing back the frontiers of knowledge. Engineering, in contrast, is more about applications and making things work and could be called Applied Physics. Mathematics is the language of physics and physicists generally really like it. Curiosity is the hallmark of physicists.

Department Degree

- Physics, Associate of Science (<https://snow-next.courseleaf.com/programs/physics-as/>)